IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Tarczynski et al.   Confirmation No.: To be assigned
Appl. No.:   To be assigned
Filed: August 16, 2001
For: METHODS AND COMPOSITIONS FOR MODIFYING OIL
                AND PROTEIN CONTENT IN PLANTS

STATEMENT IN SUPPORT OF FILING A
SEQUENCE LISTING UNDER 37 CFR § 1.821(f)

Commissioner for Patents
Washington, DC 20231

Sir:

    I hereby state that the content of the paper and computer readable copies of the Sequence

Listing, submitted concurrently herewith in accordance with 37 CFR § 1.821(c) and (e), are the
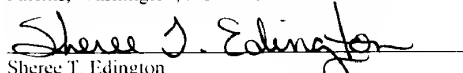
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Respectfully submitted,

W. Murray Spruill
Attorney for Applicant
Registration No. 32,943

</div>

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Sheree T. Edington

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<110>  Tarczynski, Mitchell C
       Li, Changjiang

<120>  Methods and Compositions for Modifying Oil and Protein
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gtgtcgaatt cacgtgtagg ctctgaatct tgactgtgtt cgttatttt cgcttgtttc   2024

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gtttcttgtt acaaaaggag ctagcactaa cagggtggtg agttttgtaa acggggcgag  2144

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Phe Tyr Ala Val Ser Phe Val Lys Asp Ala Lys Val Ile His Glu Leu
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Lys Asp Tyr Leu Lys Ser Ala Asn Ala Asp Ile His Val Ile Pro Lys
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Ser Asp Gly Ala Met Val Ala Arg Gly Asp Leu Gly Ala Glu Leu Pro
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Ser Met Glu Lys Pro Val Ile Val Ala Thr Asn Met Leu Glu Ser Met
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Ile Asp His Pro Thr Pro Thr Arg Ala Glu Val Ser Asp Ile Ala Ile
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Ala Val Arg Glu Gly Ala Asp Ala Ile Met Leu Ser Gly Glu Thr Ala
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His Gly Lys Tyr Pro Leu Lys Ala Val Lys Val Met His Thr Val Ala
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Leu Arg Thr Glu Ser Ser Leu Tyr Asn Pro Thr Thr Ser Pro Ser Leu
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Val Ala Ser Ala Gln Gly Leu Gln Asn Glu Asp Phe Ser Ala Ser Gln
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Leu Ser Lys Met Phe Gly Ser His Ala Thr Met Met Ala Asn Thr Leu
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Arg Thr Pro Ile Ile Val Phe Thr Gln Thr Gly Ser Met Ala Val Leu
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6

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Glu Arg Val Lys Gln Arg Leu Ala Leu Tyr Gln Gly Val Ile Pro Ile
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His Met Gln Phe Ser Asp Asp Ala Glu Glu Thr Phe Ser Arg Ala Ile
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Ser Ser Leu Leu Lys Ala Gln Tyr Val Lys Lys Gly Asp Tyr Val Thr
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                                 1                   5

ggg gag gag ccc gtg gcg cgg cgc cgg cct aag acc aag atc gtc tgc   222
Gly Glu Glu Pro Val Ala Arg Arg Arg Pro Lys Thr Lys Ile Val Cys
 10                  15                  20                  25

acg ctc ggc ccg gcg tcg cga tcc gtc gag atg atc tcg cgc ctg ctg   270
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aga act gga ttt ttg aaa gat ggg aag cct att caa ttg ata aaa ggc     462
Arg Thr Gly Phe Leu Lys Asp Gly Lys Pro Ile Gln Leu Ile Lys Gly
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caa gaa atc aca att tct aca gac tat agc att cag ggt gat gag aaa     510
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atg ata tca atg agc tac aag aag ctt gct gtt gat ctg aag cca ggc     558
Met Ile Ser Met Ser Tyr Lys Lys Leu Ala Val Asp Leu Lys Pro Gly
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cag atg ttg gaa tct atg atc aag tct cct cgc cct act cgg gca gaa    1086
Gln Met Leu Glu Ser Met Ile Lys Ser Pro Arg Pro Thr Arg Ala Glu
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gta gcc aag tat agg cca tcc atg ccg att ctg tcc gtt gtg gtt cct    1422
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9

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            460                 465                 470


ttt gcc att gaa aat gcg aag acg atg ggg cta tgc aac acc ggt caa    1614
Phe Ala Ile Glu Asn Ala Lys Thr Met Gly Leu Cys Asn Thr Gly Gln
        475                 480                 485


tcc gtt gtg gcc ctg cac cgc atc ggg att tca tcc gtc atc aag ctt    1662
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10

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Val Arg Cys Arg Cys Glu Asn Thr Phe Lys Leu Gly Glu Arg Lys Asn
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Glu Asn Gln Glu Gly Val Ala Asn Phe Asp Asp Ile Leu Ala Asn Ser
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Asp Ala Phe Met Val Ala Arg Gly Asp Leu Gly Met Glu Ile Pro Ile
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Glu Lys Ile Phe Phe Ala Gln Lys Val Met Ile Phe Lys Cys Asn Ile
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11

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Val Cys Thr Leu Gly Pro Ala Ser Arg Ser Val Pro Met Leu Glu Lys
         30   35   40

ctg ctc cgc gcc ggc atg aac gtc gcg cgc ttc aac ttc tcc cac ggc   374
Leu Leu Arg Ala Gly Met Asn Val Ala Arg Phe Asn Phe Ser His Gly
         45   50   55

acc cac cag tac cac cag gag acg ctc gac agc ctc cgc cag gcc atg   422
Thr His Gln Tyr His Gln Glu Thr Leu Asp Ser Leu Arg Gln Ala Met
 60   65   70   75

cac aac acc ggc atc ctc tgc gcc gtc atg ctc gac acc aag ggt cct   470
His Asn Thr Gly Ile Leu Cys Ala Val Met Leu Asp Thr Lys Gly Pro
                 80   85   90

gag att cgt aca ggg ttt ttg aag gat ggt aaa cca att aag cta acc   518
Glu Ile Arg Thr Gly Phe Leu Lys Asp Gly Lys Pro Ile Lys Leu Thr
                 95   100   105

aag ggt caa gag atc act gtt acc act gat tat gat atc aag ggt gac   566
Lys Gly Gln Glu Ile Thr Val Thr Thr Asp Tyr Asp Ile Lys Gly Asp
         110   115   120

gaa aaa atg atc gct atg agt tac aag aaa ctg cct gtt gac gtg aag   614
Glu Lys Met Ile Ala Met Ser Tyr Lys Lys Leu Pro Val Asp Val Lys
         125   130   135

cct gga aat gtc ata ctc tgc gca gat ggt act atc tct ctg gcc gtt   662
Pro Gly Asn Val Ile Leu Cys Ala Asp Gly Thr Ile Ser Leu Ala Val
140   145   150   155

ctg tct tgc gat cct gat gct gga act gtg cgt tgt agg tgt gag aac   710

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Leu Ser Cys Asp Pro Asp Ala Gly Thr Val Arg Cys Arg Cys Glu Asn
                    160   165   170

act gca atg ctt ggt gag aga aag aac tgc aat ttg cca gga att gtt   758
Thr Ala Met Leu Gly Glu Arg Lys Asn Cys Asn Leu Pro Gly Ile Val
            175   180   185

gtg gat ctt cct aca ttg act gag aaa gat aaa gaa gat att ttg ggc   806
Val Asp Leu Pro Thr Leu Thr Glu Lys Asp Lys Glu Asp Ile Leu Gly
            190   195   200

tgg ggt gtt cca aat gac att gac atg att gct cta tcc ttt gtc cgt   854
Trp Gly Val Pro Asn Asp Ile Asp Met Ile Ala Leu Ser Phe Val Arg
            205   210   215

aaa gga tca gat ttg gtg act gtc aga cag gtt ctt ggg cag cat gcc   902
Lys Gly Ser Asp Leu Val Thr Val Arg Gln Val Leu Gly Gln His Ala
220   225   230   235

aag cgc att aag ttg atg tca aag gtt gag aac caa gag ggt gtt gta   950
Lys Arg Ile Lys Leu Met Ser Lys Val Glu Asn Gln Glu Gly Val Val
                    240   245   250

aac ttt gat gag atc ttg agg gag act gat gct ttt atg gtt gct aga   998
Asn Phe Asp Glu Ile Leu Arg Glu Thr Asp Ala Phe Met Val Ala Arg
                    255   260   265

ggt gat ctg gga atg gag att cca gtc gag aag att ttc ctt gcg cag   1046
Gly Asp Leu Gly Met Glu Ile Pro Val Glu Lys Ile Phe Leu Ala Gln
            270   275   280

aag atg atg atc tac aag tgc aac att gct ggc aaa cct gtt gtt act   1094
Lys Met Met Ile Tyr Lys Cys Asn Ile Ala Gly Lys Pro Val Val Thr
            285   290   295

gct acc cag atg ctc gag tcg atg atc aaa tct cct cgg ccg aca cgt   1142
Ala Thr Gln Met Leu Glu Ser Met Ile Lys Ser Pro Arg Pro Thr Arg
300   305   310   315

gct gag gcc act gac gtt gca aat gcc gtt ctt gat gga act gac tgt   1190
Ala Glu Ala Thr Asp Val Ala Asn Ala Val Leu Asp Gly Thr Asp Cys
                    320   325   330

gtc atg ctc agc gga gag agt gcc gct gga gcc tac ccc gag gtg gct   1238
Val Met Leu Ser Gly Glu Ser Ala Ala Gly Ala Tyr Pro Glu Val Ala
                    335   340   345

gtg aag atc atg gct cgt att tgc atc gag gca gaa tct tcc ctg gac   1286

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Val Lys Ile Met Ala Arg Ile Cys Ile Glu Ala Glu Ser Ser Leu Asp
        350                 355             360


cac gag gca gtt ttc aag gcc atg atc agg tcc gcg cct ctt cca atg   1334
His Glu Ala Val Phe Lys Ala Met Ile Arg Ser Ala Pro Leu Pro Met
        365                 370             375


agc cct ctg gag tcc ctt gca tca tct gct gtg agg act gcc aac aag   1382
Ser Pro Leu Glu Ser Leu Ala Ser Ser Ala Val Arg Thr Ala Asn Lys
380                 385                 390                 395


gcc aag gct gca ctg att gtc gtc ctg act cgc ggt ggc acc acg gcc   1430
Ala Lys Ala Ala Leu Ile Val Val Leu Thr Arg Gly Gly Thr Thr Ala
                400                 405                 410


aaa ctg gtc gcc aag tac cgc ccc agg gtc ccc atc ctc tcc gtt gtc   1478
Lys Leu Val Ala Lys Tyr Arg Pro Arg Val Pro Ile Leu Ser Val Val
                415                 420                 425


gta ccc gtg ctt acg acc gac tct ttc gac tgg acc atc agc tcc gag   1526
Val Pro Val Leu Thr Thr Asp Ser Phe Asp Trp Thr Ile Ser Ser Glu
            430                 435                 440


ggc cca gct agg cac agc ctg atc tac aga ggc ctc att ccc ctc ctc   1574
Gly Pro Ala Arg His Ser Leu Ile Tyr Arg Gly Leu Ile Pro Leu Leu
        445                 450                 455


gcc gag ggc tcc gcg aag gct acg gat tca gag tcg acg gag gtg atc   1622
Ala Glu Gly Ser Ala Lys Ala Thr Asp Ser Glu Ser Thr Glu Val Ile
460                 465                 470                 475


ctt gag gcc gcg ttg aag tcg gcc gtg cag aag cag ctc tgc aag cct   1670
Leu Glu Ala Ala Leu Lys Ser Ala Val Gln Lys Gln Leu Cys Lys Pro
                480                 485                 490


ggt gat gcc atc gtg gct ctt cat cgt att ggc gtc gcc tcc gtc atc   1718
Gly Asp Ala Ile Val Ala Leu His Arg Ile Gly Val Ala Ser Val Ile
                495                 500                 505


aag atc tgc atc gtg aag tgatcaccac gacctggttc tcactgctgg           1766
Lys Ile Cys Ile Val Lys
        510


gattccatga aacagctttt ctgcctcctt tttactgcat ttttttccgg agacagatat 1826


ttatgttgta agcctgcgtc tgttgtttgc agttgcggaa tgttttttgt tcacgtagtt 1886


atttagctgg taaatgggga gggagaggac tccattgatg ttagtggtaa taagatttgt 1946
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gtctatggag ttgagttgaa agggtttttt catgctaagc cccgagacac taggagatgg 2006

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aaaaaaaaa   2075

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<213> Zea mays

<400> 6
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 1   5   10   15

Ala Gly Asp Ala Arg Leu Pro Lys Thr Lys Leu Val Cys Thr Leu Gly
            20   25   30

Pro Ala Ser Arg Ser Val Pro Met Leu Glu Lys Leu Leu Arg Ala Gly
            35   40   45

Met Asn Val Ala Arg Phe Asn Phe Ser His Gly Thr His Gln Tyr His
     50   55   60

Gln Glu Thr Leu Asp Ser Leu Arg Gln Ala Met His Asn Thr Gly Ile
 65   70   75   80

Leu Cys Ala Val Met Leu Asp Thr Lys Gly Pro Glu Ile Arg Thr Gly
                85   90   95

Phe Leu Lys Asp Gly Lys Pro Ile Lys Leu Thr Lys Gly Gln Glu Ile
            100   105   110

Thr Val Thr Thr Asp Tyr Asp Ile Lys Gly Asp Glu Lys Met Ile Ala
            115   120   125

Met Ser Tyr Lys Lys Leu Pro Val Asp Val Lys Pro Gly Asn Val Ile
            130   135   140

Leu Cys Ala Asp Gly Thr Ile Ser Leu Ala Val Leu Ser Cys Asp Pro
145   150   155   160

Asp Ala Gly Thr Val Arg Cys Arg Cys Glu Asn Thr Ala Met Leu Gly
                165   170   175

Glu Arg Lys Asn Cys Asn Leu Pro Gly Ile Val Val Asp Leu Pro Thr

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Leu Thr Glu Lys Asp Lys Glu Asp Ile Leu Gly Trp Gly Val Pro Asn
        195   200   205

Asp Ile Asp Met Ile Ala Leu Ser Phe Val Arg Lys Gly Ser Asp Leu
        210   215   220

Val Thr Val Arg Gln Val Leu Gly Gln His Ala Lys Arg Ile Lys Leu
225   230   235   240

Met Ser Lys Val Glu Asn Gln Glu Gly Val Val Asn Phe Asp Glu Ile
                245   250   255

Leu Arg Glu Thr Asp Ala Phe Met Val Ala Arg Gly Asp Leu Gly Met
                260   265   270

Glu Ile Pro Val Glu Lys Ile Phe Leu Ala Gln Lys Met Met Ile Tyr
                275   280   285

Lys Cys Asn Ile Ala Gly Lys Pro Val Val Thr Ala Thr Gln Met Leu
                290   295   300

Glu Ser Met Ile Lys Ser Pro Arg Pro Thr Arg Ala Glu Ala Thr Asp
305   310   315   320

Val Ala Asn Ala Val Leu Asp Gly Thr Asp Cys Val Met Leu Ser Gly
                325   330   335

Glu Ser Ala Ala Gly Ala Tyr Pro Glu Val Ala Val Lys Ile Met Ala
                340   345   350

Arg Ile Cys Ile Glu Ala Glu Ser Ser Leu Asp His Glu Ala Val Phe
                355   360   365

Lys Ala Met Ile Arg Ser Ala Pro Leu Pro Met Ser Pro Leu Glu Ser
        370   375   380

Leu Ala Ser Ser Ala Val Arg Thr Ala Asn Lys Ala Lys Ala Ala Leu
385   390   395   400

Ile Val Val Leu Thr Arg Gly Gly Thr Thr Ala Lys Leu Val Ala Lys
                405   410   415

Tyr Arg Pro Arg Val Pro Ile Leu Ser Val Val Val Pro Val Leu Thr
        420   425   430

Thr Asp Ser Phe Asp Trp Thr Ile Ser Ser Glu Gly Pro Ala Arg His

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Ser Leu Ile Tyr Arg Gly Leu Ile Pro Leu Leu Ala Glu Gly Ser Ala
    450   455   460

Lys Ala Thr Asp Ser Glu Ser Thr Glu Val Ile Leu Glu Ala Ala Leu
465   470   475   480

Lys Ser Ala Val Gln Lys Gln Leu Cys Lys Pro Gly Asp Ala Ile Val
                485   490   495

Ala Leu His Arg Ile Gly Val Ala Ser Val Ile Lys Ile Cys Ile Val
            500   505   510

Lys